

PAT-NO: JP408097778A  
DOCUMENT-IDENTIFIER: JP 08097778 A  
TITLE: OPTICAL COMMUNICATION EQUIPMENT  
PUBN-DATE: April 12, 1996

INVENTOR-INFORMATION:  
NAME  
HIRASHIMA, AKIRA

ASSIGNEE-INFORMATION:  
NAME COUNTRY  
SONY CORP N/A

APPL-NO: JP06251660  
APPL-DATE: September 21, 1994

INT-CL (IPC): H04B010/105, H04B010/10, H04B010/22, H04B010/14, H04B010/06  
, H04B010/04, H04B010/08

ABSTRACT:

PURPOSE: To predict accurately the service life much different from between equipments and from the operating condition by providing an operating state monitor means of the laser diode and an arithmetic means predicting a deterioration state of the characteristic of the laser diode.

CONSTITUTION: The equipment is provided with a storage means 26 storing characteristic data of a laser diode 4, monitor means 21-23 monitoring the operating state of the laser diode 4 and providing an output of monitor results V2-V4, and an arithmetic processing means 24 predicting a time when the characteristic of the laser diode 4 is deteriorated up to a specified characteristic or predicting the deteriorated state of the characteristic based on the characteristic data and the monitor results V2-V4. Then the characteristic data of the laser diode 4 are stored in a storage means 26 and the time when the characteristic of the diode 4 is deteriorated to be a specified characteristic or the deteriorated state of the diode is predicted based on the characteristic data and the monitor results V2-V4 of the laser diode 4 to accurately predict the service life of the laser diode 4.

COPYRIGHT: (C)1996,JPO

----- KWIC -----

Abstract Text - FPAR (1):

PURPOSE: To predict accurately the service life much different from between equipments and from the operating condition by providing an operating state monitor means of the laser diode and an arithmetic means predicting a deterioration state of the characteristic of the laser diode.

Abstract Text - FPAR (2):

CONSTITUTION: The equipment is provided with a storage means 26 storing characteristic data of a laser diode 4, monitor means 21-23 monitoring the operating state of the laser diode 4 and providing an output of monitor results V2-V4, and an arithmetic processing means 24 predicting a time when the characteristic of the laser diode 4 is deteriorated up to a specified characteristic or predicting the deteriorated state of the characteristic based on the characteristic data and the monitor results V2-V4. Then the characteristic data of the laser diode 4 are stored in a storage means 26 and the time when the characteristic of the diode 4 is deteriorated to be a

|    |        |   |   |                  |
|----|--------|---|---|------------------|
| 15 | 3296   | current near15 (shut adj2 down)   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:19 |
| 17 | 0      | 369/\$.ccls. and (((detect\$5 near25 (current or "rms")) and (current near10 ("rms" or root))) and (current near15 (shut adj2 down)))                                   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:19 |
| 16 | 53     | ((detect\$5 near25 (current or "rms")) and (current near10 ("rms" or root))) and (current near15 (shut adj2 down))  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:19 |
| 18 | 6983   | exponent\$5 near15 current  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:23 |
| 19 | 0      | ((detect\$5 near25 (current or "rms")) and (current near10 ("rms" or root))) and (current near15 (shut adj2 down)) and (exponent\$5 near15 current)                     | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:24 |
| 20 | 0      | 369/\$.ccls. and (((detect\$5 near25 (current or "rms")) and (current near10 ("rms" or root))) and (current near15 (shut adj2 down))) and (exponent\$5 near15 current)) | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:24 |
| 21 | 43     | (current near15 (shut adj2 down)) and (exponent\$5 near15 current)  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:38 |
| 22 | 20     | eiji near2 tadokoro   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:39 |
| 23 | 9      | hidekazu near2 kamon  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:40 |
| 24 | 26     | (eiji near2 tadokoro) or (hidekazu near2 kamon)   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:44 |
| 25 | 271924 | sony  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:47 |
| 26 | 34856  | abnormal near7 (state or operation)   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:48 |
| 27 | 366    | 369/\$.ccls. and (abnormal near7 (state or operation))  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:48 |
| 28 | 161799 | laser near15 (measur\$5 or detect\$5 or read\$5)  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM TDB | 2004/05/05 11:49 |

|    |        |  |   |                  |
|----|--------|--|---|------------------|
| 29 | 477579 | temperature near15 (measur\$5 or detect\$5 or read\$5)   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 11:49 |
| 30 | 19743  | (laser near15 (measur\$5 or detect\$5 or read\$5)) and (temperature near15 (measur\$5 or detect\$5 or read\$5))  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 11:49 |
| 31 | 13     | (369/\$.ccls. and (abnormal near7 (state or operation))) and ((laser near15 (measur\$5 or detect\$5 or read\$5)) and (temperature near15 (measur\$5 or detect\$5 or read\$5))) | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:02 |
| 32 | 110246 | (service or aging or maintain\$5) near3 life   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:28 |
| 33 | 400    | (abnormal near7 (state or operation)) and ((service or aging or maintain\$5) near3 life)   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:03 |
| 34 | 4      | 369/\$.ccls. and ((abnormal near7 (state or operation)) and ((service or aging or maintain\$5) near3 life))  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:21 |
| 35 | 17     | "4747091"  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:21 |
| 36 | 116349 | (service or remain\$5 or maintain\$5) near3 life   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:28 |
| 37 | 5331   | laser near7 life   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:28 |
| 38 | 881    | ((service or remain\$5 or maintain\$5) near3 life) and (laser near7 life)  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:29 |
| 39 | 25     | sony and (((service or remain\$5 or maintain\$5) near3 life) and (laser near7 life))   | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:35 |
| 40 | 16     | hirashima near2 akira  | USPAT;<br>US-PGPUB;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | 2004/05/05 12:35 |